DOCUMENT RESUME

ED 154 493 88 EA 010 584

TITLE	Individually Guided Education (IGE) Program. 1974-1975 Final Report.
INSTITUTION	Austin Independent School District, Tex. Office of Research and Evaluation.
SPONS AGENCY	Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.
PUB DATE	23 Jun 75
NOTE	35p.; For a related document, see EA 010 585; Not available in paper copy due to small print in parts of the original document; Some tables may be marginally legible
AVAILABLE FROM	Office of Research and Evaluation, Austin Independent School District, 6100 Guadalupe, Austin, Texas 78752 ($1.45)
EDRS PRICE	MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	Academic Achievement; Elementary Education; *Individualized Instruction; *Program Evaluation; Student Attitudes; Tables (Data)
IDENTIFIERS	Austin Independent School District TX; California Achievement Tests; *Individually Guided Education

ABSTRACT

This report is the continuation report of an evaluation of the implementation of the Individually Guided Education (IGE) Program in the Austin (Texas) Independent School District which began during the second year of the program implementation in 1973-74. The evaluation continued to focus this year on the achievement of program inputs, processes, and outcomes in 11 IGE and 11 matched comparison schools. The major emphasis of the evaluation this year was on determining program effects on student outcome behaviors. Utilized in the study were teacher and parent questionnaires; scores from the California Achievement Tests, the Piers Harris Children's Self Concept Scale, the School Sentiment Index, a Reading Attitude Test, a Math Attitude Test, and a student behavior rating scale; and classroom observations. Despite some positive effects demonstrated on objectives in the affective area, the lack of positive results on achievement lead to the conclusion that the IGE program should be discontinued. (Author)

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1974-1975

FINAL REPORT

Individually Guided Education (IGE) Program

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This report has been prepared with the support of an ESEA Title III grant for the project entitled Designing and Implementing a Model Evaluation Capability in the Austin Independent School District.

The project presented or reported herein was performed pursuant to a Grant from the Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the Department and no official endorsement by the Department should be inferred.

TABLE OF CONTENTS

Section		Page
I.	Abstract	2
II.	Decision Questions and Recommendations	3
III.	Description of the Project and Evaluation	6
IV.	Context Report	9
V.	Objectives	12
VI.	Interrelationships	31

I

ABSTRACT

This report is the continuation report of an evaluation of the implementation of the Individually Guided Education (IGE) Program in the Austin Independent School District (Austin, Texas) which began during the second year of the program implementation in 1973-74. The evaluation continued to focus this year on the achievement of program inputs, processes, and outcomes in 11 IGE and 11 matched Comparison schools. The major emphasis of the evaluation this year was on determining program effects on student outcome behaviors. Utilized in the study were teacher and parent questionnaires; scores from the California Achievement Test, the Piers-Harris Self-Concept Test, the School Sentiment Index, a Reading Attitude Test, a Math Attitude Test, and a student behavior rating scale; and classroom observations.

Despite some positive effects demonstrated on objectives in the affective area, the lack of positive results on achievement lead to the conclusion that the IGE program should be discontinued.

II

DECISION QUESTIONS AND RECOMMENDATIONS

Decision questions can ultimately be answered only by those charged with with the decision-making responsibility; however, recommendations by the evaluation staff based upon their knowledge and interpretation of the information that has been gathered relative to each decision question is included in this section in order to assist with that charge. Although this is considered to be a professional responsibility of the evaluation staff, decision-makers are encouraged to review in its entirety all the data presented in this report and its acccmpanying technical report in order to arrive at their decisions.

A. SYSTEM-LEVEL QUESTIONS

1. Should the Individually Guided Education (IGE) Program be continued at its present level, expanded, or discontinued?

   Recommendation:

   IGE should be discontinued.

   Basis for Recommendation:

   Althought there are some indications of success for the program with respect to student attitudes toward school and reading, because of the indications of achievement benefits and some evidence of negative achievement effects along with the heavy resource and staff demands it creats, the program cannot be recommended for further implementaion. (See Cognitive Objectives report section.)

2. If IGE is continued, are there additional resources which should be made available if further improvements in the performance of IGE students are expected?

   Recommendation:

   Should the decision to continue the program be made, indications are that sufficient clerical and aide resources should be granted teachers so that instructional time is not decreased by IGE team and other planning activities and by record keeping.

   Basis for Recommendation:

   On this spring's teacher questionnaire, teachers indicated that sufficient time was their major problem while additional teachers, aides, and clerical assistance were cited as their highest direct service needs. In considering the total data configuration of this evaluation, the possibility clearly stood out that the time demands of IGE without the concommitant resources it specifies may have reduced instruction time and attention, thus resulting in the achievement problem noted.

3. If IGE is continued, should it be implemented only in schools with student groups having certain identifiable characteristics?

Recommendation:

If IGE is continued, there is no particular reason given the data of this and last year's evaluation to believe that any restriction on type of school or student population should be considered.

Basis for Recommendation:

Various subpopulations related to sex, ethnicity, and Title I status were considered last year and found to have no different outcome patterns. This year students with differing entry levels of achievement--high, medium, and low--were considered and again no differential effects were identified.

4. Are there any particular characteristics or elements of the IGE package whose implementation should be encouraged in AISD elementary schools irrespective of the decision with respect to the total IGE program.

Recommendation:

Again, this year as last it appears that teachers can be encouraged to utilize a variety of grouping and to maintain a high level of classroom harmony.

Basis for Recommendation:

Each of these processes showed positive correlations with achievement at either the second or fourth grade level; these were processes as rated by teachers on the spring teacher questionnaire. Also, classroom observation correlations showed that high levels of student disruptiveness was negatively associated with achievement.

B. Program-Level Decision Questions

1. Should additional training be provided?

Recommendation:

Additional training should be provided if the program is continued.

Basis for Recommendation:

Additional training was a need voiced by some teachers with respect to IGE. Staff training came out as a relatively high indirect support need. Some indications that teachers are not fully satisfied with their skills in given areas means that additional training should be considered in those areas regardless of IGE implementation. Items mentioned here are information gathered on the Spring and Fall Teacher Questionnaires.

2. If additional training is required, should it be of a particular type?

Recommendation:

Additional training is indicated in the following areas:

1. If IGE is continued, training in the specifics of IGE processes and procedures.
2. Student assessment methods.
3. Developing mathematics instructional objectives.
4. Deciding which mathematics activities and materials to use in relation to objectives.
5. Deciding which reading/language arts activities and materials to use in relation to objectives.

Basis for Recommendation:

1. The first item is recommended because of teacher comments on the Spring Teacher Questionnaire.
2. The last four because these were the skills which IGE teachers rated themselves lowest on in the Fall teacher questionnaire.

III

DESCRIPTION OF THE PROJECT

A. PROGRAM DESCRIPTION

IGE - What It Is

IGE is the acronym for Individually Guided Education. IGE is an educational program which was designed and developed at the Wisconsin Research and Development Center for Cognitive Learning with the cooperation of other educational institutions including the Institute for Development of Educational Activities, Inc. (I/D/E/A/).

Some of the goals of the IGE program are the following:

- Continuous evaluation of each child's learning progress and educational needs;
- Use of a variety of audio-visual materials to accomodate each child's learning style;
- Provision of a cooperative atmosphere in which the teacher and child decide on the child's instructional objectives and learning activities together; and
- Individualized instruction with teacher tutoring.

The organizational structure which IGE literature recommends for implementation of these goals includes:

- Organization of IGE schools into a multiunit pattern with no grade level divisions. Each unit should consist of a teaching team composed of from two to four teachers with one unit leader and one to two aides. Each unit should be responsible for from 75 to 125 students whose ages encompass a three-year span. The team members' skills should cover the spectrum of school subjects.
- School organization of an administrative body known as the Instructional Improvement Committee (IIC) which consists of the school's unit leaders and the principal; and
- Organization of a "league" of IGE school members and people from support agencies who share ideas with one another about how to implement IGE.

IGE in the Austin Independent School District

In the spring of 1972 the Austin Independent School District studied the concepts of the IGE program, its goals, objectives, and directions. A series of workshops was held to expose Austin elementary school principals and their faculties to the IGE philosophy. Of 22 schools expressing an interest in implementing IGE, eleven were selected as IGE pilot schools. During the first year of implementation, these schools were allocated an additional number of observers and student teachers to be in their schools.

The district provided some additional materials and permitted some differentiation of staff by allowing schools in some cases to select two aides in the place of one teacher. The Region XIII Education Service Center, the local I/D/E/A/ representative and program administrators also provided some additional resources to IGE schools. Further breakdown on expenditures to support the program will be found in last year's evaluation report.

Implementation by the eleven IGE pilot schools of the organizational structure suggested in the IGE literature has varied considerably from school to school. For example, some schools have utilized the full complement of professionsals suggested in the multiunit approach. Other schools have performed with no instructional or clerical aides. The eleven schools have approached the tasks of providing continuous evaluation, a variety of audio-visual materials, individualized instruction, and cooperative planning in many different ways and to varying degrees. For example, in some schools, individualization occurs through grouping (such as ability grouping); in other schools, individualization occurs for each individual student without regard to placement in a group. In addition, the eleven pilot schools have differed in the subject matter for which IGE instructional procedures were utilized. The pilot schools were permitted to choose one or both of the curriculum topics of mathematics or reading/language arts from which IGE instructional procedures were to be implemented. Three of the pilot schools chose to implement the IGE methods in mathematics instruction; five of the pilot schools chose to implement the IGE methods in reading/language arts instruction; and the remaining three pilot schools chose to implement the IGE methods in both mathematics instruction and in reading/language arts instruction.

The comments above serve to point out the fact that there is no "typical" IGE school in the Austin Independent School District. Further, the IGE schools in Austin do not necessarily follow the ideal model suggested in the IGE literature. However, all the schools have teams, usually called units, and most have an Instructional Improvement Committee (IIC). Austin IGE schools also belong to either of two leagues which include all Region XIII IGE schools.

B. EVALUATION DESCRIPTION

Purposes of the IGE Evaluation

The IGE Evaluation was conducted for two primary reasons:

- To provide information to AISD relative to the program implementation and operation and as an assist to decision-making.
- To demonstrate an evaluation model designed for AISD under an ESEA Title III grant (AISD CIPO Evaluation Model).

General Evaluation Approach

The general approach used in this evaluation this year as last year has been to compare the standing on relevant variables of those schools designated as IGE to that of as comparable a set of 11 non-IGE schools as could be selected. These schools are designated as Comparison schools throughout this report. Those factors considered in the selection of these Comparison schools were socio-economic-status of the school population, geographic location in the city, size of the school's student population, and ethnic composition of the student population.

This picture has been complicated by the fact that the schools differed in the subject area to which IGE processes were primarily applied as was pointed out in the program description above. Moreover, for one IGE and one Comparison school some prior year test scores were unavailable because of their involvement in a special program. Another IGE school had only the fourth and fifth grades meaning that no second grade scores could be used for gains analyses; nor could it be considered in current analyses related to the second grade.

Thus, while it appeared necessary throughout this evaluation to examine results based on subgroupings of the schools in accordance with their areas of emphases, this results in smaller groupings of schools and hence a greater likelihood that any failure of the comparison schools to exactly match up with the IGE schools could affect the results achieved. There is a much higher likelihood that the matching process is an effective mechanism when 22 schools are involved than when six to eight schools are involved. Overall comparisons are therefore more likely meaningful than the subgroupings that are at times considered.

IV

CONTEXT

INTRODUCTION

As defined in the AISD CIPO Planning and Evaluation Model, the context is that portion of the environment in which a program is implemented and over which the program has little or no control. That is, a program controls the materials it purchases, the staff it hires, and the procedures it follows, but it has little control over social factors such as the current public opinion demand for a "back-to-basics" education.

Many context factors including this demand for a reemphasis on basic skills have heavily influenced IGE implementation in the Austin Independent School District and note must be taken of these. In addition, some aspects of the contextual reaction against IGE might be predicted to influence other future programs, and this chapter will also be used to comment on these.

IMPLEMENTING INNOVATION IN A SCHOOL SYSTEM

Last year's IGE evaluation delineated some of the parameters which must be taken into account in evaluating educational innovations. In particular, the complexity of implementing a complex "innovation bundle" such as IGE was noted, and a plea for time for the large scale innovation to establish itself was entered.

In this year's report, it must be acknowledged that the general lack of positive evaluation findings in last year's report and the continued lack of fiscal and moral support to teachers trying to implement IGE from the Board and administration may have adversely affected the possibilities of further improvement or even further implementation of IGE in the 1974-75 school year. This supposition is supported by increased indications of teacher concern and negativism regarding such support as reflected in the spring teacher questionnaire. It may also account for the lower levels of difference between IGE and Comparison schools with respect to IGE processes this year.

Thus, this year it must again be stressed even more strongly that this evaluation is of the AISD implementation of IGE concepts and not of an idealized IGE concept. Process measures again bear out the fact that many different levels of implementation of IGE procedures exist within the IGE schools from very high levels of implementation to very low levels. Congruently, many IGE concepts and practices may be found in implementation in the Comparison schools. Since clearly traditional, non-individualized schools are not available for comparison purposes, however, it can be noted that the major variable under consideration in this evaluation may be simply the label "IGE."

In other words, the message of last year's context report was that such a large scale innovation as IGE would require three or more years for a valid evaluation of that innovation. Whether, because of its context situation, IGE was ever given such a period is clearly questionable. School staffs give indication that they do not believe the necessary support for implementation was given. Thus, in many senses, this evaluation may well have been of a "non-program."[1]

IGE FEASIBILITY

Perhaps the most important question that then follows in this evaluation might be the very subtle one: "What level and source of special program support is feasible for undertaking such an implementation in the district?"

The granting of AISD resources to one given program over another must be carefully considered. The granting of special resources to one set of schools over another must be clearly justified in the minds of other schools. Teacher comments that have been received in the various evaluations of this office indicate that schools staffs question even such a clearly justifiable program as the reduction of the pupil/teacher ratio in Title I schools. It is perhaps obvious now that the allocation of regular district resources in support of change programs may not be given without arousing the ire and resentment of non-program staff. Thus, in last year's evaluation meetings with school staffs, non-IGE teachers voiced frequent complaints about the special resources that they believed IGE schools were receiving (erroneously believing at that time). They, in fact, thought IGE schools were receiving many resources that IGE school teachers were at the very same time protesting were not being allocated.

The obvious lesson to be drawn is that prior to any new program approval an indepth analysis of support requirements, both immediate and future, and the feasibility of such support allocation both on a pilot and on a district-wide basis should be considered.

EXTERNAL VERSUS INTERNAL INNOVATION SPONSORSHIP

Both the research on innovation and this evaluation support the need for "a knight on a white horse" to run the gauntlet in new program implementation. The Region XIII Educational Service Center was the prime sponsor and supporter of IGE in the Austin Independent School District. All indications are that this is not a feasible approach to innovation adoption. Rather, for any given change effort, the district must have its own "knight" who manages and pushes for the new program. IGE lacked this internal advocate and the effects of that lacking on program achievement is unknown.

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1 W.W. Charters and J. E. Jones. On the risk of appraising non-events in program evaluation. Educational Researcher, II, 11 (November 1970) pp. 5-7.

THE RELATIONSHIP OF THE COMPLEXITY OF A PROGRAM TO ITS LIKELIHOOD OF SUCCESSFUL ADOPTION

Last year's context report stressed the complexity of the IGE innovation bundle and quoted Dr. Gene Hall's work on innovation which suggested that it takes a minimum of three year's for an innovation to become a natural part of a system. When the complex and rapidly changing environment of an individual campus is considered, one feels a sense of despair about the implementation of even one major innovation concept. So many staff changes have occured, for example in the IGE schools: new principals at Sunset Valley, Highland Park, and Pecan Springs; large teacher turnovers in many schools; a new Director of Elementary Education; and new Area Directors. Each of these persons in essence entered the IGE innovation at a different level of training and orientation. The difficulty of bringing change to the field of education begins to be a truly appreciated task. Clearly, the need for school districts and individual schools to take on only manageable and smaller scale changes may thus need to be stressed. When the needs of society for education which can adapt to its own rapidly changing demands is realized, the double bind in which education find itself is discouraging.

What is required are brave and responsive educators and boards of education who remain willing to try in the face of such high possibilities of failure. Austin's teachers, administrators, and board members must be both commended and praised for this willingness.

THE RELATIONSHIP OF PROGRAM DETAIL AND SPECIFICITY TO ITS LIKELIHOOD OF SUCCESSFUL ADOPTION

One of the major problems with evaluating the IGE program with the district CIPO model was the lack of specificity of its program design. Much of its literature is descriptive in such global and general terms that schools cannot determine what it is that they are supposed to be doing; it is then difficult to evaluate whether indeed they are implementing the program. The evaluators cannot help but speculate that the thoroughness and quality of the program design will to a large extent determine the effectiveness with which it is implemented; under the best of circumstances this may in turn lead to successful student outcomes.

OVERVIEW OF OBJECTIVES

ACHIEVEMENT

OUTCOME OBJECTIVES	ACHIEVEMENT
IMPROVED ATTITUDE TOWARD SCHOOL	X
IMPROVED ATTITUDE TOWARD READING	X
IMPROVED STUDENT ATTITUDE TOWARD MATHEMATICS	
IMPROVED STUDENT ATTENDANCE	
IMPROVED STUDENT SELF-CONCEPT	
IMPROVED STUDENT INDEPENDENCE IN LEARNING ACTIVITIES	
INCREASED READING SKILLS	
INCREASED MATHEMATICS SKILLS	
NON-DECREASED MATHEMATICS SKILLS	
NON-DECREASED READING SKILLS	X
PROCESS OBJECTIVES	
EFFECTIVE USE OF INTERCLASS GROUPING	X
USE OF A VARIETY OF INSTRUCTIONAL MATERIALS	
DIFFERENTIATED ASSIGNMENTS	
DIFFERENTIATED TUTORING	
CLASSROOM HARMONY	
INPUT OBJECTIVES	
INFORMATION SHARING	
PLANNING TIME	
INSERVICE FOR IGE	
EFFECTIVE PARENTAL SUPPORT	X
BALANCED ASSIGNMENT OF STUDENTS AND TEACHERS TO UNITS	X

V.

OBJECTIVES

A brief overview of the objectives and of their achievement can be obtained from the table on the preceding page. Each objective is discussed in greater detail below.

OUTCOME OBJECTIVES

I. AFFECTIVE OBJECTIVES

1. IMPROVED ATTITUDE TOWARD SCHOOL[1]

The mean School Sentiment Index score for the Spring administration to a sample of 4th grade IGE students will be significantly greater than the corresponding mean School Sentiment Index score for a comparable sample of Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The table reproduced below indicates that IGE fourth grade students have significantly higher total scores on the School Sentiment Index and higher scores on the subscales relating to attitudes toward teachers and peers.

COMPARISON OF IGE SCHOOL STUDENTS AND COMPARISON SCHOOL STUDENT SCORES ON THE SCHOOL SENTIMENT INDEX IN THE SPRING OF 1975

SCALE	F	P	DIRECTION OF DIFFERENCE
Teacher	14.49	.00*	Favors IGE
Learning	.00	1.00	Favors Comparison
Social Structure	.00	1.00	Favors IGE
Peers	14.57	.00*	Favors IGE
General	4.25	.04*	Favors Comparison
Total	32.57	.00*	Favors IGE

*Significant at the .05 level.

[1] Additional objectives relating to attitudes of subpopulations of sex, ethnicity, and identified Title I students require more elaborate analysis procedures and could not be completed in time for this report. An addendum will be published at a later date covering these subobjectives.

2. IMPROVED STUDENT ATTITUDE TOWARD READING

The mean score on the Spring administration of the Elementary Reading Attitude Test, for a random sample of IGE students in units which are emphasizing reading/verbal skills, will be significantly higher than the corresponding mean score for Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The table reproduced below indicates that the attitudes of students in the five IGE schools concentrating their emphasis with IGE processes on reading/language arts is significantly more positive toward reading on the total score and on all subscales than are those of Comparison school students.

In an additional analysis in which an additional school concentrating on both reading and math was considered along with these schools, the total attitude toward reading score remained significantly higher as did the subscales of During School Free Time and After School.

TABLE A.2 COMPARISON OF STUDENTS IN IGE READING CONCENTRATION SCHOOLS AND A SPECIFIC COMPARISON SCHOOL ON READING ATTITUDE[1]

Subscale Liking to read:	Group	N (Sample Size)	Mean (Average Score)	P
During Class	IGE Reading	93	3.7	.05*
	Comparison	99	3.3	
During School Free Time	IGE Reading	93	1.4	.001*
	Comparison	99	.8	
After School	IGE Reading	93	1.9	.004*
	Comparison	99	1.4	
Before Bedtime	IGE Reading	93	1.8	.01*
	Comparison	99	1.3	
Total	IGE Reading	93	6.8	.0004*
	Comparison	99	6.8	

1 Fourth graders tested in April, 1975.
*Accepted as statistically significant.

IGE Group = 5 IGE Reading Concentration Schools.

Comparison Group = All matched comparison schools for the schools in the IGE group.

3. IMPROVED STUDENT ATTITUDE TOWARD MATHEMATICS

The mean score on the Spring administration of a Mathematics Attitude Test, for a random sample of IGE students in units which are emphasizing mathematics, will be significantly greater than the corresponding mean score for Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

The table reproduced below indicates that there is not a significant difference between the attitudes of students in IGE schools concentrating with IGE processes on math and those of students in Comparison schools. Nor is there a significant difference between the attitudes of students in IGE schools concentrating on both reading and math and those in their matched Comparison schools.

COMPARISON OF IGE MATH CONCENTRATION SCHOOLS AND THEIR MATCHED COMPARISON SCHOOLS AND OF IGE MATH/READING CONCENTRATION SCHOOLS AND THEIR COMPARISON SCHOOLS ON ATTITUDE TOWARD MATH.

Group	N	Average Score	P
IGE Math Schools	72	11.3	.56
Comparison Schools	70	11.8	
IGE Math/Reading Schools	36	11.3	.87
Comparison Schools	34	11.5	

4. IMPROVED STUDENT ATTENDANCE

The mean proportion of IGE students attending school during the first two six weeks of the Spring semester will be significantly greater than the corresponding mean proportion of Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

The median percentage of attendance for IGE schools was 94.58 while that of the Comparison schools was 94.61. This was a non-significant difference.

5. IMPROVED STUDENT SELF-CONCEPT[1]

The mean Piers-Harris Self-Concept Test score for the Spring administration to a sample of 4th grade IGE students will be significantly greater than the corresponding mean Piers-Harris Self-Concept Test score for a comparable sample of Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

The table reproduced below indicates that the only significant difference on the Pier-Harris Self-Concept test scores was on the subscale "Popularity" and that difference favored the Comparison school students.

COMPARISON OF IGE AND COMPARISON SCHOOL STUDENT SCORES ON THE PIERS-HARRIS SELF-CONCEPT TEST SPRING 1975

Scale	F	P	Direction
Behavior	.024	.87	Favors IGE
Intellectual and School Status	1.33	.25	Favors Comparison
Physical Appearance and Attributes	.32	.58	Favors Comparison
Anxiety	.24	.63	Favors IGE
Popularity	4.25	.04*	Favors Comparison
Happiness and Satisfaction	.002	.96	Favors IGE
Total	.38	.55	Favors Comparison

*Significant at the .05 level.

[1] Additional objectives relating to attitudes of subpopulations of sex, ethnicity, and identified Title I students require more elaborate analysis procedures and could not be completed in time for this report. An addendum will be published at a later date covering these subobjectives.

6. IMPROVED STUDENT INDEPENDENCE IN LEARNING ACTIVITIES

A. The mean of the teacher ratings of a sample of former IGE students now attending 6th grade schools for student independence will be significantly greater than the corresponding mean rating for a sample of Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

In a follow-up study of former IGE students in the sixth grade, teachers did not rate IGE students significantly higher than non-IGE students on the item "dependent - self-initiating." Also, although they were assigned a higher rating on that item than former Comparison school students, they were rated lower, again not significantly so however, than former Comparison school students on the item "Looks for help - figures out his own problems."

It should be noted, however, in another part of that study that students from a highly individualized IGE school performed significantly higher on the "dependent - self-initiating" item and higher (but not significantly so) on the "Looks for help - figures out his own problems" item than did former students from an IGE school with a low level of individualization.

B. The mean Classroom Observation ratings for independence in IGE units will be significantly greater than the corresponding mean rating for Comparison school classes.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

Classroom observations utilizing the Office of Research and Evaluation Systematic Classroom Observation Form assigned the following ratings for Student Independence:

Subscale	Group	Second Grade Mean	P	Fourth Grade Mean	P
Student Independence	IGE	42.3	.75	37.6	.33
	Comparison	39.5		29.4	

It may be seen that although IGE ratings were higher, these differences fell in the chance range and thus may not be judged as statistically significant differences.

II. COGNITIVE OUTCOME OBJECTIVES

1. INCREASED READING SKILLS

The CAT in all sub-objectives described below refers to the California Achievement Test in Reading.

A. The mean CAT gain score of the IGE students between February 1972-73 (as 2nd graders) and February 1974-75 as 4th graders) will be significantly greater than the corresponding mean CAT gain score of Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

The comparison of IGE school student gains for students in IGE schools emphasizing reading to Comparison school student gains indicated a significant difference between the two. The direction of the difference favored the Comparison students.

B. The mean CAT score of IGE 2nd grade students in February 1974-75 will be significantly greater than the corresponding mean CAT score for Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

The mean raw score of second grade IGE students in IGE schools emphasizing reading only on the California Achievement Test in Reading was 52.63 versus a 49.57 for Comparison school students. The difference was non-significant.

C. The mean CAT score of IGE 4th grade students in February 1974-75 will be significantly greater than the corresponding mean CAT score for Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The mean raw score of fourth grade IGE students in IGE schools emphasizing reading only on the California Achievement Test in Reading was 38.18 versus the 35.22 for Comparison school students. The difference was not statistically significant.

D. The mean CAT gain score of 6th grade school students (formerly attending IGE schools in units emphasizing IGE instruction in reading and other verbal skills) between February 1972-73 (as 4th graders) and February 1974-75 (as 6th graders) will be significantly greater than the corresponding mean CAT gain score of 6th grade school students who formerly attended Comparison schools.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

An analysis of covariance on the post-test scores with pretest (4th grade) scores as a covariable indicated that relationships were not linear and that this analysis could not be appropriately conducted. However, an analysis of variance which included a pre-post test analysis failed to indicate a significant between groups difference or groups by trials interaction.

E. The mean CAT score of 6th grade school students (formerly attending IGE schools in units emphasizing IGE instruction in reading and other verbal skills in February 1974-75 will be significantly greater than the corresponding mean CAT score of sixth grade school students who formerly attended Comparison schools.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

The mean Achievement Development Scale Score (standardized score designed to permit cross-level comparisons) of a sample of former IGE students now in the sixth grade was 442.94 while that of a sample of Comparison school students was 456.04 even though the scores of comparison students when they were in the fourth grade had been lower than those of the IGE students.

F. There is no subpopulation of elementary students (as defined by a classification of students according to one or more of the criteria of sex, ethnicity, previous achievement level, or whether they attend a Title I elementary school) such that the mean CAT reading score for IGE students in the subpopulation is significantly less than the comparable mean for comparison school students in the subpopulation.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

Only the analysis regarding subpopulations related to previous achievement have been completed at this time. No differences related to ethnicity or Title I status were detected, however, in last year's analyses. For the analyses related to previous achievement, students were classified on pretest (2nd grade) scores into high, medium, and low achievement groups. Then analyses were conducted to see whether differential achievement gains occurred for these groups. Results indicated that no differential gains could be attributed to any one group.

2. INCREASED MATHEMATICS SKILLS

The CAT in all sub-objectives described below refers to the California Achiement Test in Mathematics.

A. The mean CAT gain score of the IGE students between February 1972-73 (as 2nd graders) and February 1974-75 (as 4th graders will be significantly greater than the corresponding mean CAT gain score of Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

An analysis of gain scores on the CAT in math detected no significant difference between IGE school students of IGE schools emphasizing math and Comparison students, although Comparison school students did have a slightly higher average gain.

B. The Mean CAT score of IGE 2nd grade students in February 1974-75 will be significantly greater than the corresponding mean CAT score for Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

Mean 2nd grade raw scores on the CAT in math for IGE students was 61.07 and this was lower than that of 2nd grade Comparison school students who scored 63.64. This difference was not, however, significant.

C. The mean CAT math score of IGE 4th grade students in February 1974-75 will be significantly greater than the corresponding mean CAT score for Comparison school students.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

The mean IGE fourth grade raw score on the CAT in math was 48.61, slightly lower than the mean of 51.21 for Comparison school students, although the difference was not a significant one.

D. There is no subpopulation of elementary school students (as defined by a classification of students according to one or more of the criteria of sex, ethnicity, previous achievement level, or whether they attend a Title I elementary school) such that the mean CAT math score for IGE students in the subpopulation is significantly less than the comparable mean for comparison school students in the subpopulation.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

Only the analysis regarding subpopulations related to previous achievement have been completed at this time. No differences related to ethnicity or Title I status were detected, however, in last year's analyses. For the analyses related to previous achievement, students were classified on pretest (2nd grade) scores into high, medium, and low achievement groups. Then analyses were conducted to see whether differential achievement gains occurred for these groups. Results indicated that no differential gains could be attributed to any one groups.

3. NON-DECREASED MATHEMATICS SKILLS

For each of the sub-objectives below, the only IGE students who were considered were those in units which are emphasizing their IGE instruction in the areas of reading and other verbal skills. The rationale for this restriction is that although students in reading-oriented IGE units might not be expected to perform better than other students on mathematics achievement tests, they would certainly be expected not to perform worse. All sub-objectives refer to the Mathematics Test of the California Achievement Tests (CAT).

A. The mean CAT gain score of IGE reading school students between February 1972-73 (as 2nd graders) and February 1974-75 (as 4th graders) will not be significantly less than the corresponding mean CAT gain score of Comparison school students.

LEVEL OF ATTAINMENT: Not achieved.

The mean CAT math gain score for IGE reading schools students was significantly lower than that of Comparison school students.

B. The mean CAT score of IGE 2nd grade students in February 1974-75 will not be significantly less than the corresponding mean CAT score for Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The mean CAT math score for students in the IGE reading/language arts oriented schools was significantly higher (65.39) than that of Comparison school students (60.20).

C. The mean CAT math score of IGE 4th grade students in February 1974-75 will not be significantly less than the corresponding mean CAT score for Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The mean CAT math score for students in the IGE reading/language arts oriented schools was higher, although not significantly so (46.34), than that of Comparison school students (44.81). In view of the results reported on objective 3.A above, however, it must be concluded that this lack of difference was due to a higher entry level of IGE students or to a change in the student population over the period of 1972-73 to 1974-75 with regard to some factor other than IGE.

D. The mean CAT gain score of 6th grade school students formerly attending IGE schools in units emphasizing IGE instruction in reading and other verbal skills between February 1972-73 (as 4th graders) and February 1974-75 (as 6th graders) will not be significantly less than the corresponding mean CAT gain score of 6th Grade Center students who formerly attended Comparison schools.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

An analysis of covariance on the post-test scores with pretest (4th grade) scores as a covariable indicated that relationships were not linear and that this analysis could not be appropriately conducted. However, an analysis of variance which included a pre-post test analysis failed to indicate a significant between groups difference or groups by trials interaction on the math test.

E. The mean CAT score of 6th grade school students (formerly attending IGE schools in units emphasizing IGE instruction in reading and other verbal skills) in February 1974-75 will not be significantly less than the corresponding mean CAT score of 6th grade center students who formerly attended Comparison schools.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The score of former IGE students in the sixth grade was 428.97, which was higher, but not significantly so, than that of Comparison school students (416.08).

4. NON-DECREASED READING/VERBAL SKILLS

For each of the sub-objectives in this section only the IGE students in units which are emphasizing their IGE instruction in mathematics are considered. The rationale for this restriction is that although students in mathematics-oriented IGE units might not be expected to perform better than other students on the reading achievement test, they would certainly be expected not to perform worse. All sub-objectives refer to the California Achievement Test (CAT) in Reading.

A. The mean CAT gain score of IGE mathematics school students between February 1972-73 (as 2nd graders) and February 1974-75 (as 4th graders) will not be signficantly less than the corresponding mean CAT gain score of Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

IGE math school students achieved higher gains, although not significantly so, than did Comparison school students.

B. The mean CAT reading score of IGE math school 2nd grade students in February 1974-75 will not be significantly less than the corresponding mean CAT score for Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The mean CAT reading score of IGE math school 2nd grade students in February 1974-75 was lower (61.07), but not significantly so, than that of Comparison school students (63.64).

C. The mean CAT reading score of IGE math school 4th grade students in February 1974-75 will not be significantly less than the corresponding mean score for Comparison school students.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

The mean CAT reading score of IGE math school 4th grade students in February 1974-75 was lower (48.61), but not significantly so, than that of the corresponding Comparison school students (51.21).

PROCESS OBJECTIVES

1. EFFECTIVE USE OF INTERCLASS GROUPING

   Teachers will make use of grouping procedures to insure that each pupil is assigned to a group performing activities consistent with the pupil's needs and skills.

   LEVEL OF ATTAINMENT: Achieved

   EVIDENCE:

   Classroom observations indicated significantly smaller groups (7.4) at the fourth grade level for IGE classes than for Comparison school classes (11.1). There was no significant difference in group sizes at the second grade level. There was also no significant difference in the percent of time teachers spent with groups at either grade level.

   Teachers rated themselves significantly higher on the "Variety of Grouping" (4.0) subscale of the spring teacher questionnaire than did Compairison school teachers (3.8).

2. USE OF A VARIETY OF INSTRUCTIONAL MATERIALS

   Teachers will make use of different instructional materials to insure that each pupil works with materials consistent with his needs and skills.

   LEVEL OF ATTAINMENT: Not Achieved

   EVIDENCE:

   Teachers did not rate themselves significantly higher on the subscale of the Spring Teacher Questionnaire related to this objective (3.82) than did Comparison school teachers (3.76).

   Classroom observations did not reveal a signficantly higher level of use of a variety of instructional materials in IGE classes than in Comparison school classes.

3. DIFFERENTIATED ASSIGNMENTS

   Teachers will assign activities and objectives to each pupil based on the pupil's needs and skills.

   LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

IGE teachers rated their use of differentiated assignments as lower (mean=3.79) than did Comparison teachers (mean=3.86), although this difference was not significant.

4. DIFFERENTIATED TUTORING

Teachers will insure that pupils are tutored by making use of all personnel such as aides or other pupils for tutoring.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

Teachers in IGE schools rated neither the availability subscale nor the use subscale of differentiated tutoring items on the 1975 Spring Teacher Questionnaire significantly higher than did Comparison school teachers.

Classroom observations did not show the pupil/adult ratios in IGE classrooms overall to be significantly lower than those in Comparison school classes. However, when the fourth grade only is considered, pupil/adult ratios were significantly lower in IGE classrooms.

5. CLASSROOM HARMONY

Teacher will insure that a class situation exists with mutual respect between teachers and pupils and among pupils.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

Classroom observations revealed no signficant differences between IGE and Comparison classrooms in percent time students were disruptive. Also, there were no signficant differences between the percent of time the teacher was supportive or negative between IGE and Comparison classrooms.

IGE teachers did not rate their classrooms significantly higher (3.86) on the subscale of the Spring Teacher Questionnaire related to this objective than did Comparison school teachers (3.96).

1. INFORMATION SHARING

Each school and each unit in the school will have an effective procedure for sharing useful information and discussing common problems.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

Teachers on the fall teacher questionnaire assigned high ratings to several items related to this objective (see table below), but ratings were not significantly higher than those assigned by Comparison school teachers. It should also be mentioned, however, that several teachers did mention this as one of the areas of benefit of IGE on the comment section of that questionnaire.

Questionnaire Item		All Title I Schools	All Non-Title I	IGE-Reading	IGE-Math	IGE-Reading/Math	All IGE	All Comparison	All Schools
9. How satisfied are you with the advice and assistance given to you by other teachers of your school for your planning and teaching activities?	X	4.14	3.94	4.21	4.00	3.95	4.05	3.96	4.24
	S.D.	.61	.89	.80	.83	.72	.78	.84	.80
	n.	95	208	48	39	60	147	156	324
10. How satisfied are you with the advice and assistance given you by your principal for your planning and teaching activities?	X	3.93	3.91	4.28	3.53	3.69	3.84	3.85	3.84
	S.D.	.91	.94	.71	.85	.99	.92	.94	.91
	n.	98	204	47	39	58	144	158	321
11. How satisfied are you with the advice and assistance given you by the AIGE Instructional Coordinators for your planning and teaching activities?	X	3.45	3.41	3.72	3.15	3.38	3.43	3.42	3.47
	S.D.	1.10	1.07	1.09	1.11	.90	1.04	1.12	1.08
	n.	96	207	47	39	60	146	157	322
12. How satisfied are you with the advice and assistance given you by the ESC [illegible] staff for your planning and teaching activities?	X	3.21	3.14	3.07	2.97	3.12	3.06	3.25	3.20
	S.D.	1.00	1.07	1.14	1.14	.97	1.07	1.02	1.04
	n.	92	193	45	39	58	142	143	305

2. PLANNING TIME

Teachers will have time for requisite planning to carry out the IGE instructional processes.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

In the first year of IGE implementation teachers were given the support of extra services from student teachers. During the last two years, however, no additional aides or student teachers were assigned to assist teachers. Now the chief problems cited by teachers with respect to IGE on the Spring Teacher Questionnaire are: Lack of support or aide personnel, time, and recordkeeping. Many of their comments associated these three items. All point to the lack of adequate time to implement the IGE program.

3. INSERVICE FOR IGE

Region XIII ESC will provide inservice sessions and a facilitator to provide in-service assistance.

LEVEL OF ATTAINMENT: Not Achieved

EVIDENCE:

Ratings given ESC Region XIII service this year are far more positive this year than last, but it should be noted that the lowest rating shown in the table below went to Region XIII. Finally, teachers in IGE schools did not offer ratings significantly different from those of Comparison school teachers. Also, lack of training was one of the problems associated with IGE implementation that was offered on the free response item of the questionnaire.

4. EFFECTIVE PARENTAL SUPPORT

Principals will conduct a program for keeping parents informed of school activities and soliciting feedback from parents. Parents will on the average express support for the IGE program.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

Parents of IGE school students generally expressed approval of the IGE program. They also expressed satisfaction with their school's communication with parents. These results were obtained from a parent questionnaire mailed to a random sample of IGE and Comparison school parents.

5. BALANCED ASSIGNMENT OF STUDENTS AND TEACHERS TO UNITS

Principals will insure that teachers assigned to a unit are compatible and represent a range of teaching skills, and that pupils are assigned to units so that a balanced mixture of student characteristics of ethnicity and achievement level exists in each unit.

LEVEL OF ATTAINMENT: Achieved

EVIDENCE:

No additional data was collected on this objective this year and the judgement with respect to attainment is based on 1973-74 data; however, no teacher comments or complaints with respect to this topic were obtained on the data questionnaires. It seems reasonable to believe that this objective continued to be met.

VI

INTERRELATIONSHIPS

A key part of the CIPO Evaluation Model is the evaluation of interrelationships that exist between inputs, processes, outcomes, and the context. Some of this evaluation may be based upon logical deductions regarding the patterns of data. Other evaluations of these relationships are based upon correlational studies. Both these approaches have been used in the study of IGE interrelationships.

CONTEXT AND PROGRAM ACHIEVEMENTS

In the Context section of this report, considerable discussion of the effects which the context climate may have had upon the program outcomes will be found. It seems unquestionable that the period of intense public controversy that has been associated with the IGE implementation and with the concepts of open education have had considerable effects upon the outcomes of the program.

PLANNING TIME AND ACHIEVEMENT

One of the heavy input requirements for the conducting of the IGE program is planning time. This is required for team teaching, for the paperwork associated with more individualization and interclass grouping, and locating and preparing a variety of materials. Teachers are vocal in their comments that not enough time has been available. Logically, it appears that this shortage of time expressed by teachers may have influenced the achievement of outcome objectives.

INDIVIDUALIZATION AND ACHIEVEMENT

The information collected in this evaluation offered conflicting data regarding the relationship between individualization and achievement. In a cooperative study with Dr. Gene Hall of the University of Texas Research and Development Center for Teacher Education, it was found that higher levels of implementation of individualized instruction was associated with higher achievement. In a followup study of former students of an IGE highly individualized school versus those from a low individualized IGE school, evidence favoring more positive behaviors were found for the students of the highly individualized school. However in the first study there were some problems with sample sizes, that is, too few classrooms at some levels of individualization. In the second study, it is possible that socio-economic-status accounted for the differences. In a third study, intercorrelations were examined between

classroom observation findings and achievement data. Again, it is possible that other factors than individualization may account for differences, but results indicated a negative relationship between individualization and reading achievement. It is possible, however, that teachers may find it necessary to individualize more where they have students with low reading scores.

In conclusion, it is possible that either a negative or a positive relationship may exist between the degree of individualization and achievement. It is clearly a relationship that requires a great deal more study than was possible in this evaluation.

OTHER INTERRELATIONSHIPS

Classroom Observation Variables and Student Outcome Behaviors

Variables measured with the Systematic Classroom Observation Form were intercorrelated with outcome behavior measures.

The following relationships in this data were observed:

In schools where instructional groups are large, students do not function as independent learners. They also have a higher self concept, like the teacher more, and have a higher overall attitude toward school. (This relationship might mean nothing more than that Title I students have a lower self concept and lower attitude toward school than non Title I students, since Title I schools have smaller instructional groups due to the lower pupil/teacher ratio in those schools.)

In schools where teachers are more supportive, students do not perceive themselves to be behavior problems, anxious, or unhappy.

In schools with higher pupil/adult ratios, students perceive themselves as more attractive, less anxious, and happier. (Once again, this may indicate a Title I - non Title I difference.)

In schools populated with anxious students, students also report to liking their teacher very much.

In schools where students do not perceive themselves to be behavior problems, students also consider themselves to be popular and happy.

In schools where students feel they are academically successful, students also feel that they are popular and happy.

In schools where students consider that they are attractive, students also feel themselves to be popular.

In schools populated by students with high self concepts, students also profess to have a more positive attitude toward all facets of school (teachers, learning, their peers, etc.).

Teacher Questionnaire Variables and Student Outcome Behaviors

Subscales of the teacher questionnaire given in the Spring of 1975 were intercorrelated with achievement variables. Last year's findings in this regard were replicated: Classrooms with more positive climates (greater Classroom Harmony) and classrooms with higher availability of tutoring have higher achievement. Again, it is possible that the availability of tutoring is related to the socio-economic-status of the students, however, which might explain this relationship.